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東京大学理学部 1 号館西棟 11 階 1109 号室 (天文学専攻会議室) にて

“Magnetic fields of cosmic bodies generated and maintained by dynamos”

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The focus of the lecture is on the mean-field dynamo theory of cosmic magnetic fields. The central element of this theory is the mean electromotive force due to the velocity and magnetic field fluctuations in turbulent electrically conducting fluids, which depends in general in a nonlinear way on the mean velocity and the mean magnetic field. Within this framework several types of dynamo models applying to cosmic objects have been developed. Considerable progress has been achieved in the last years in determining the mean electromotive force in realistic situations and so in the elaboration of mean-field dynamo models.